

## ABSTRACT OF THE INVENTION

The present invention provides a novel method for inhibiting the cyclooxygenase enzyme COX-2. The method is comprised of administering a composition containing a Free-B-Ring flavonoid or a composition containing a mixture of Free-B-Ring flavonoids to a host in need thereof. The present also includes novel methods for the prevention and treatment of COX-2 mediated diseases and conditions. The method for preventing and treating COX-2 mediated diseases and conditions is comprised of administering to a host in need thereof an effective amount of a composition containing a Free-B-Ring flavonoid or a composition containing a mixture of Free-B-Ring flavonoids and a pharmaceutically acceptable carrier.